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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Petri Lammi

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EXAMINER

NGUYEN, PHU HOANG

ART UNIT

PAPER NUMBER

1791

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/560,349	Applicant(s) LAMMI, PETRI	
	Examiner PHU H. NGUYEN	Art Unit 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 December 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Acknowledgement is made of Amendment received 12/26/2007. Claims 1-9 are currently amended.

Claim Rejections - 35 USC § 102/103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Vitkala et al. (U.S Patent No. 6427488).

Regarding claim 1, Vitkala discloses a method for regulating the heating effect of resistances (6, fig. 1) (corresponding to the claimed “heating elements” recites in the instant claim 1) in a furnace (1, fig. 1) and hot-air fans (5, fig. 1) blasting down on the glass, which furnace comprises a glass heating section (1,2 of fig. 1) capable of receiving multiple glass sheets, a transportation rail (7, fig. 1) to transport glass sheets to and from the said heating section and said heating elements to heat the glass sheets by means of radiation and an air blast, and a furnace control system (13, fig. 1). A

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temperature sensor (12, fig. 1) (corresponding to the claimed “measuring instruments” recites in the instant claim 1) measures the air temperatures in the heating section above glass transportation rail. The control system regulates the power received by the heating elements, such that the air temperature in the furnace remains substantially constant at a certain set value (column 2, line 19-33). Vitkala also discloses the temperature difference between the glass and the furnace air that will diminishing upon the heating of the glass (column 2, lines 33-40). It is inherently that the temperature sensor is observing a location area and watching one or more glass sheets whereby a lowered temperature measured by the temperature sensor is indicative of the presence of a glass sheet to be heated.

In the alternative, it would be obvious use a temperature sensor for observing and watching a location area and measure the air temperature and indicate the presence of glass sheet when the measured air temperature is lower since Vitkala teaches a difference in temperature between the glass and the furnace air diminishing upon the heating of the glass which means the glass temperature is lower than that of the furnace air.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vitkala et al. (U.S Patent No. 6427488) as applied to claim 1 above, and further in view of Maguire et al. (U.S Patent No. 5957961).

Regarding claims 2-4 and 6, Vitkala does not expressly disclose the use of multiple sensors arranged in a pattern where the temperature average of them is calculated to control the heating of glass. Maguire discloses a method of controlling temperature where temperature processing circuit takes the signals from the temperature sensors and either use the average temperature or the highest temperature (column 13, line 20-26) (the processing circuit inherently calculate the average temperature as it receives signals from the sensors); also Maguire discloses a number of sensors arranged in a desired location where each sensor providing an output indicative of temperature (Abstract). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use multiple sensors arranged at desired locations for a more complete heating profile of the observed space and use the average temperatures of the sensors to control heating power needed.

Regarding claim 5, although Vitkala does not expressly disclose the sensors are located about 10-50 mm above glass/rail. It would have been obvious to one of ordinary skill in the art at the time the invention was made through routine experiments to determine the optimal location for sensors that deliver the best signal to the controller. See *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

Regarding claim 9, Vitkala discloses temperature measuring sensor (12, fig. 1) is placed above the glass transportation rail (7, fig. 1) to measure the air temperature and to have free radiation contact down onto the glass transportation rail.

Response to Arguments

Applicant's arguments filed 12/26/2007 have been fully considered but they are not persuasive.

Applicant essentially argues that Vitkala patent discloses a method for heating glass sheets in which a temperature sensor is used to maintain the air heating temperature of the furnace substantially constant while the amended independent claim 1 of the present invention is used to observe specifically where in a furnace a glass sheet is by temperature detectors. The by use of the control system, the heating effect of the elements at the observed location area is increased. Upon further consideration, the Examiner found that Vitkala temperature sensor also observing/watching a location area wherein the temperature sensor measure air temperature. Furthermore, Vitkala discloses that there is a difference in furnace air and glass sheet that need to be heated which means that a lowered temperature measured indicates the presence of glass sheet and by increase heating power to heat the glass the temperature between the glass and the furnace air will diminish. Therefore, the amended independent claim 1 does not overcome the rejection over the Vitkala patent.

Applicant further argues for dependent claims 5 and 9 that the optimization made with regarding to the sensing of the air temperature of the furnace to maintain it at a constant value as taught by the Vitkala patent is different from the present invention

where the sensors are used to determine the location area of a glass sheet. However, the temperature sensor of the present invention also measure air temperature and also determine the location of a glass sheet by this measured air temperature wherein the lowered temperature measured is indicative of the presence of a glass sheet to be heated as taught by Vitkala (column 2, lines 33-40). Therefore, optimization process of placing the sensor to best monitor the air temperature would work for both Vitkala and the present invention since both sensors are meant to measuring air temperature.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PHU H. NGUYEN whose telephone number is (571)272-5931. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Phillip Tucker can be reached on 571-272-1095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

P.N 3/25/2008

***/Philip C Tucker/
Supervisory Patent Examiner, Art Unit 1791***